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## CONTINUOUS PROCESS FOR THE SYNTHESIS OF NANO-SCALE PRECIOUS METAL PARTICLES

## **ABSTRACT OF THE DISCLOSURE**

The present invention relates to the continuous production of nano-scale precious metal particles on SiH-containing support materials, the compositions themselves, and the use of these precious metal-containing compositions as catalyst. The continuous process according to the invention includes impregnating support materials and, after thermal activation, drying the support materials by spraying or by fluidized bed technology leads to form precious metal-containing support compositions that are active in the catalysis of oxidation reactions. The catalytically active precious metal-containing support compositions exhibit high selectivities and productivities and have very long catalyst service lives without deactivation. The invention also relates to a process for the oxidation of hydrocarbons in the presence of oxygen, a reducing agent and the precious-metal containing support compositions of the present invention.